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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS-R1-ES-2020-0060; FF09E22000 FXES11130900000 201]

RIN 1018-BE72

Endangered and Threatened Wildlife and Plants; Removing Golden Paintbrush from the Federal List of Endangered and Threatened Plants

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; availability of draft post-delisting monitoring plan.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to remove the golden paintbrush (*Castilleja levisecta*) from the Federal List of Endangered and Threatened Plants as it no longer meets the definition of an endangered or threatened species under the Endangered Species Act of 1973, as amended (Act). The golden paintbrush is a flowering plant native to southwestern British Columbia, western Washington, and western Oregon. Our review of the best available scientific and commercial data indicates threats to the golden paintbrush have been eliminated or reduced to the point that the species is not in danger of extinction or likely to become so in the foreseeable future. We request information and comments from the public regarding this proposed rule and the draft post-delisting monitoring plan for the golden paintbrush.

DATES: We will accept comments received or postmarked on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

Comments submitted electronically using the Federal eRulemaking Portal (see

ADDRESSES, below), must be received by 11:59 p.m. Eastern Time on the closing date.

We must receive requests for a public hearing, in writing, at the address shown in **FOR**

FURTHER INFORMATION CONTACT by [INSERT DATE 45 DAYS AFTER
DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: You may submit written comments by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal:

<http://www.regulations.gov>. In the Search box, enter Docket No. FWS–R1–ES–2020–0060, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the Search panel on the left side of the screen, under the Document Type heading, check the Proposed Rule box to locate this document. You may submit a comment by clicking on “Comment Now!”

(2) *By hard copy:* Submit by U.S. mail to: Public Comments Processing, Attn: FWS–R1–ES–2020–0060, U.S. Fish and Wildlife Service, MS: PRB/3W, 5275 Leesburg Pike, Falls Church, VA 22041-3803.

We request that you send comments only by the methods described above. We will post all comments on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see **Information Requested**, below, for more details).

Document availability: This proposed rule and supporting documents, including the species biological report and the draft post-delisting monitoring plan, are available at <http://www.regulations.gov> under Docket No. FWS–R1–ES–2020–0060.

FOR FURTHER INFORMATION CONTACT: Direct all questions or requests for additional information to: GOLDEN PAINTBRUSH QUESTIONS, Brad Thompson, State Supervisor, U.S. Fish and Wildlife Service, Washington Fish and Wildlife Office, 510 Desmond Drive SE, Suite 102, Lacey, WA 98503; telephone: 360-753-9440. If you use a telecommunications device for the deaf (TDD), please call the Federal Relay Service at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Act, if we determine a plant species is no longer an endangered or threatened species, we remove it from the Federal List of Endangered and Threatened Plants (i.e., we “delist” it). A species is an “endangered species” for purposes of the Act if it is in danger of extinction throughout all or a significant portion of its range and is a “threatened species” if it is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. The golden paintbrush is listed as a threatened species. We are proposing to remove this species from the Federal List of Endangered and Threatened Plants (List), because we have determined that it no longer meets the definition of a threatened species, nor does it meet the definition of an endangered species. Delisting a species can only be completed by issuing a rule.

What this document does. This rule proposes to remove (delist) the golden paintbrush from the Federal List of Endangered and Threatened Plants under the Act because it no longer meets the definition of either a threatened species or an endangered species.

The basis for our action. Under the Act, we can determine that a species is an endangered or threatened species based on any one or more of the following five factors or the cumulative effects thereof: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. Based on an assessment of the best available information regarding the status of and threats to the golden paintbrush, we have determined that the species no longer meets the definition of an endangered or threatened species under the Act.

Because we will consider all comments and information we receive during the comment period, our final determination may differ from this proposal. Based on the new information we receive (and any comments on that new information), we may conclude that the species should remain listed as threatened instead of being delisted, or we may conclude that the species should remain listed and be reclassified as an endangered species.

Information Requested

Public Comments

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from governmental agencies, Native American Tribes, the scientific community, industry, or any other interested parties concerning this proposed rule.

We particularly seek comments concerning:

(1) Reasons why we should, or should not, remove the golden paintbrush from the List;

(2) New biological or other relevant data concerning any threat (or lack thereof) to the golden paintbrush, including threats related to its pollinators;

(3) New information on any existing regulations addressing threats or any of the other stressors to the golden paintbrush;

(4) New information on any efforts by States, tribes, or other entities to protect or otherwise conserve the species;

(5) New information concerning the range, distribution, population size, or population trends of this species;

(6) New information on the current or planned activities in the habitat or range of the golden paintbrush that may have adverse or beneficial impacts on the species; and

(7) Information pertaining to post-delisting monitoring of the golden paintbrush.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information provided.

Please note that submissions merely stating support for, or opposition to, the action under consideration without providing supporting information, although noted, will not be considered in making a determination, as section 4(b)(1)(A) of the Act (16 U.S.C. 1531 et seq.) directs that determinations as to whether any species is an endangered or threatened species must be made “solely on the basis of the best scientific and commercial data available.”

You may submit your comments and materials concerning the proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**.

If you submit information via <http://www.regulations.gov>, your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on <http://www.regulations.gov>.

Comments and materials we receive, as well as, supporting documentation we used in preparing this proposed rule and the draft post-delisting monitoring (PDM) plan, will be available for public inspection on <http://www.regulations.gov>.

Public Hearing

Section 4(b)(5) of the Act provides for a public hearing on this proposal, if requested. Requests must be received by the date specified in **DATES**, above. Such requests must be sent to the address shown in **FOR FURTHER INFORMATION**

CONTACT. We will schedule a public hearing on this proposal, if requested, and announce the date, time, and place of the hearing, as well as how to obtain reasonable accommodations, in the *Federal Register* and local newspapers at least 15 days before the hearing. For the immediate future, we will provide these public hearings using webinars that will be announced on the Service's website, in addition to the *Federal Register*. The use of these virtual public hearings is consistent with our regulations at 50 CFR 424.16(c)(3).

Supporting Documents

Staff at the Washington Fish and Wildlife Office (WFWO), in consultation with other species experts, prepared a species biological report for golden paintbrush. The report represents a compilation of the best scientific and commercial data available concerning the status of the species, including the impacts of past and present factors (both negative and beneficial) affecting the species.

In accordance with our July 1, 1994, peer review policy (59 FR 34270), our August 22, 2016, Director's Memo on the Peer Review Process, and the Office of Management and Budget's December 16, 2004, Final Information Quality Bulletin for Peer Review (revised June 2012), we solicited independent scientific reviews of the information contained in the golden paintbrush species biological report (Service 2019). We sent the report to four appropriate and independent specialists with knowledge of the biology and ecology of the golden paintbrush and received three responses. The report forms the scientific basis for our 5-year status review and this proposed rule. The purpose of peer review is to ensure that our determination regarding the status of the species under the Act is based on scientifically sound data, assumptions, and analyses. The comments and recommendations of the peer reviewers have been incorporated into the species biological report, as appropriate. In addition, we have posted the peer reviews on <http://www.regulations.gov> under Docket No. FWS-R1-ES-2020-0060.

Previous Federal Actions

On May 10, 1994, we proposed to list the golden paintbrush as a threatened species (59 FR 24106). On June 11, 1997, we finalized the listing (62 FR 31740). The final rule included a determination that the designation of critical habitat for the golden paintbrush was not prudent.

In August 2000, we finalized a recovery plan for the species (Service 2000, entire), which we supplemented in May 2010 with the final recovery plan for the prairie species of western Oregon and southwestern Washington (Service 2010, entire).

On July 6, 2005, we initiated 5-year reviews for 33 plant and animal species, including the golden paintbrush, under section 4(c)(2) of the Act (70 FR 38972). The 5-year status review, completed in September 2007 (Service 2007, entire), resulted in a recommendation to maintain the status of the golden paintbrush as threatened. The 2007 5-year status review is available on the Service's website at https://ecos.fws.gov/docs/five_year_review/doc1764.pdf.

On January 22, 2018, we initiated 5-year status reviews for 18 plant and animal species, including the golden paintbrush, and requested information on the species' status (83 FR 3014). This proposed rule follows from the recommendation of that 5-year review for the golden paintbrush, as well as the data and analysis contained in the species biological report (Service 2019).

Proposed Delisting Determination

Background

Below, we summarize information for the golden paintbrush directly relevant to this proposed rule. For more information on the description, biology, ecology, and habitat of the golden paintbrush, please refer to the species biological report for golden paintbrush (*Castilleja levisecta*), completed in June 2019 (Service 2019, entire). The species biological report is available under Supporting Documents on

<http://www.regulations.gov> in Docket No. FWS–R1–ES–2020–0060. Other relevant supporting documents are available on the golden paintbrush’s species profile page on the Environmental Conservation Online System (ECOS) at <https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=7706>.

Species Description and Habitat Information

The golden paintbrush is native to the northwestern United States and southwest British Columbia. It has been historically reported from more than 30 sites from Vancouver Island, British Columbia, to the Willamette Valley of Oregon (Hitchcock *et al.*, 1959; Sheehan and Sprague 1984; Gamon 1995). The taxonomy of the golden paintbrush as a full species is widely accepted as valid by the scientific community (ITIS 2020).

The golden paintbrush is a short-lived perennial herb formerly included in the figwort or snapdragon family (Scrophulariaceae), with current classification in the Orobanchaceae family. The genus *Castilleja* is hemiparasitic, with roots of paintbrushes capable of forming parasitic connections to roots of other plants; however, paintbrush plants are probably not host-specific (Mills and Kummerow 1988, entire) and can grow successfully, though not as well, even without a host. Golden paintbrush has superior performance (survival, height, number of flowering stems, number of fruiting stems, number of seed capsules) where it co-occurs with certain prairie species, including several perennial native forbs (e.g., common woolly sunflower or Oregon sunshine (*Eriophyllum lanatum*) and common yarrow (*Achillea millefolium*)), as well as species in other functional groups, including grasses (e.g., Roemer’s fescue (*Festuca roemerii*) and California oatgrass (*Danthonia californica*)) and shrubs (e.g., snowberry (*Symphoricarpos albus*)) (Schmidt 2016, pp. 10–17). Anecdotal observations suggest that it grows poorly when associated with annual grasses (Gamon 1995, p. 17).

Individual golden paintbrush plants have a median survival of 1 to 5 years, but some plants can survive for more than a decade (Service 2019, p. 7). Plants are up to 30 centimeters (cm) (12 inches (in)) tall and are covered with soft, somewhat sticky hairs. Stems may be erect or spreading, in the latter case giving the appearance of being several plants, especially when in tall grass. The lower leaves are broader, with one to three pairs of short lateral lobes. The bracts are softly hairy and sticky, golden yellow, and about the same width as the upper leaves.

Golden paintbrush plants typically emerge in early March, with flowering generally beginning the last week in April and continuing until early June. Most plants complete flowering by early to mid-June, although occasionally plants flower throughout the summer and into October. Based on historical collections and observations, flowering seems to occur at about the same time throughout the species' range. Individual plants of golden paintbrush typically need pollinators to set seed. Bumble bee species (*Bombus*) appear to be the most common pollinators visiting golden paintbrush (Wentworth 1994, p. 5; Kolar and Fessler 2006, *in litt.*; Waters 2018, *in litt.*; Kaye 2019, *in litt.*), although sweat bees (Halictidae), miner bee (*Andrena chlorogaster*), syrphid fly (*Eristalis hirta*), and bee fly (*Bombylius major*) have also been observed visiting golden paintbrush plants (Kolar and Fessler 2006, *in litt.*; Waters 2018, *in litt.*).

Fruits typically mature from late June through July, with seed capsules beginning to open and disperse seed in August. By mid-July, plants at most sites are in senescence (the process of deterioration with age), although this can vary considerably depending on available moisture. Capsules persist on the plants well into the winter, and often retain seed into the following spring. Seeds are likely shaken from the seed capsules by wind, with most falling a short distance from the parent plant (Godt *et al.* 2005, p. 88). The seeds are light (approximately 8,000 seeds/gram) and could possibly be dispersed short distances by wind (Kaye *et al.* 2012, p. 7). Additionally, there is at least one reported

instance of short-distance movement of seeds via vole activity (Kolar and Fessler 2006, *in litt.*). Therefore, natural colonization of new sites would likely occur only over short distances as plants disperse from established sites. Germination tests in different years with seed from various wild populations suggests that germination rates can vary extremely widely both between sites and between years (Wentworth 1994, entire). Germination tests also revealed that seeds likely remain viable in the wild for several years (Wentworth 1994, p. 17).

Individuals of the golden paintbrush require open prairie soils, near-bedrock soils, or clayey alluvial soils with suitable host plants. These suitable habitats occur from zero to 100 meters (330 feet) above sea level (Service 2000, p. 5). The golden paintbrush may have historically grown in deeper soils, but nearly all of these soils within the known range of the species have been converted to agriculture (Lawrence and Kaye 2006, p. 150; Dunwiddie and Martin 2016, p. 1).

Populations currently occur on the mainland in Washington and Oregon, and on islands in Washington and British Columbia. Mainland and island populations form two broad categories of populations that can vary slightly in habitat setting. Individuals in mainland populations are found in open, undulating remnant prairies dominated by Roemer's fescue and red fescue (*Festuca rubra*) on gravelly or clayey glacial outwash. Individuals in island populations are often on the upper slopes or rims of steep, southwest- or west-facing sandy bluffs that are exposed to salt spray. Individuals in island populations may also occur on remnant coastal prairie flats on glacial deposits of sandy loam. Island prairies may have historically been dominated by forbs and foothill sedge (*Carex tumulicola*) rather than grasses (WDNR 2004b, pp. 11, 17); however, many island sites are now dominated by red fescue or weedy forbs. All golden paintbrush sites are subject to encroachment by woody vegetation if not managed.

Historically, fire was significant in maintaining open prairie conditions in parts of the range of the golden paintbrush (Boyd 1986, p. 82; Gamon 1995, p. 14; Dunwiddie *et al.* 2001, p. 162). The golden paintbrush is a poor competitor, intolerant of shade cast by encroaching tall nonnatives and litter duff in fire-suppressed prairies. Native perennial communities are likely to support more host species appropriate for the golden paintbrush than those dominated by nonnative annuals (Lawrence and Kaye 2011, p. 173). Thus, habitats with low presence of nonnative annuals and high presence of a diverse assemblage of perennial, native prairie species are more likely to provide the best conditions for survival of golden paintbrush plants year-to-year (Dunwiddie and Martin 2016, p. 1).

Range, Distribution, Abundance, and Trends of Golden Paintbrush

The golden paintbrush is endemic to the Pacific Northwest, historically occurring from southeastern Vancouver Island and adjacent islands in British Columbia, Canada, to the San Juan Islands and Puget Trough in western Washington and into the Willamette Valley of western Oregon (Fertig 2019, p. 23).

Currently, the species occurs within British Columbia, Washington, and Oregon, representing, generally, four distinct geographic areas (British Columbia, North Puget Sound, South Puget Sound, and the Willamette Valley). The species' historical distribution—before European settlement and modern development in the Pacific Northwest—is unknown. However, the species' current distribution is generally representative of the areas where we suspect the species occurred historically.

Since its Federal listing in 1997, only one new wild population of golden paintbrush has been discovered across the species' range (Service 2007, p. 6). All other new populations (referred to as sites or populations established since the time of listing) across the range are the result of reintroductions through outplanting or direct seeding. Seeds used to grow plugs for outplanting, and plant stock for seed production, were

derived from occurrences that remained at the time of listing (wild sites) (Service 2019, p. 5).

At the time of listing (see 62 FR 31740; June 11, 1997), there were 10 known golden paintbrush populations: 8 in Washington and 2 in British Columbia. No golden paintbrush populations were known from Oregon at the time of listing (Sheehan and Sprague 1984, pp. 8–9; WDNR 2004b). Despite its limited geographic range and isolation of populations, the golden paintbrush retained exceptionally high levels of genetic diversity, possibly because there were several large populations that remained (Godt *et al.* 2005, p. 87).

Since its Federal listing, the distribution and abundance of golden paintbrush have increased significantly as a result of outplanting (seeding or plugging). In 2018, a minimum of 48 sites were documented (Service 2019, pp. 11–14). In Washington, there are 19 sites: 5 in the South Puget Sound prairie landscape, 6 in the San Juan Islands, 7 on Whidbey Island, and 1 near Dungeness Bay in the Strait of Juan de Fuca. In Oregon, there are 26 extant sites within the Willamette Valley. In British Columbia, there are three extant sites, each located on a separate island. Of these 48 sites, only three are on private property (Service 2019, p. 12). The remaining 45 golden paintbrush sites are in either public ownership, are owned by a conservation-oriented, nongovernmental organization, or are under conservation easement.

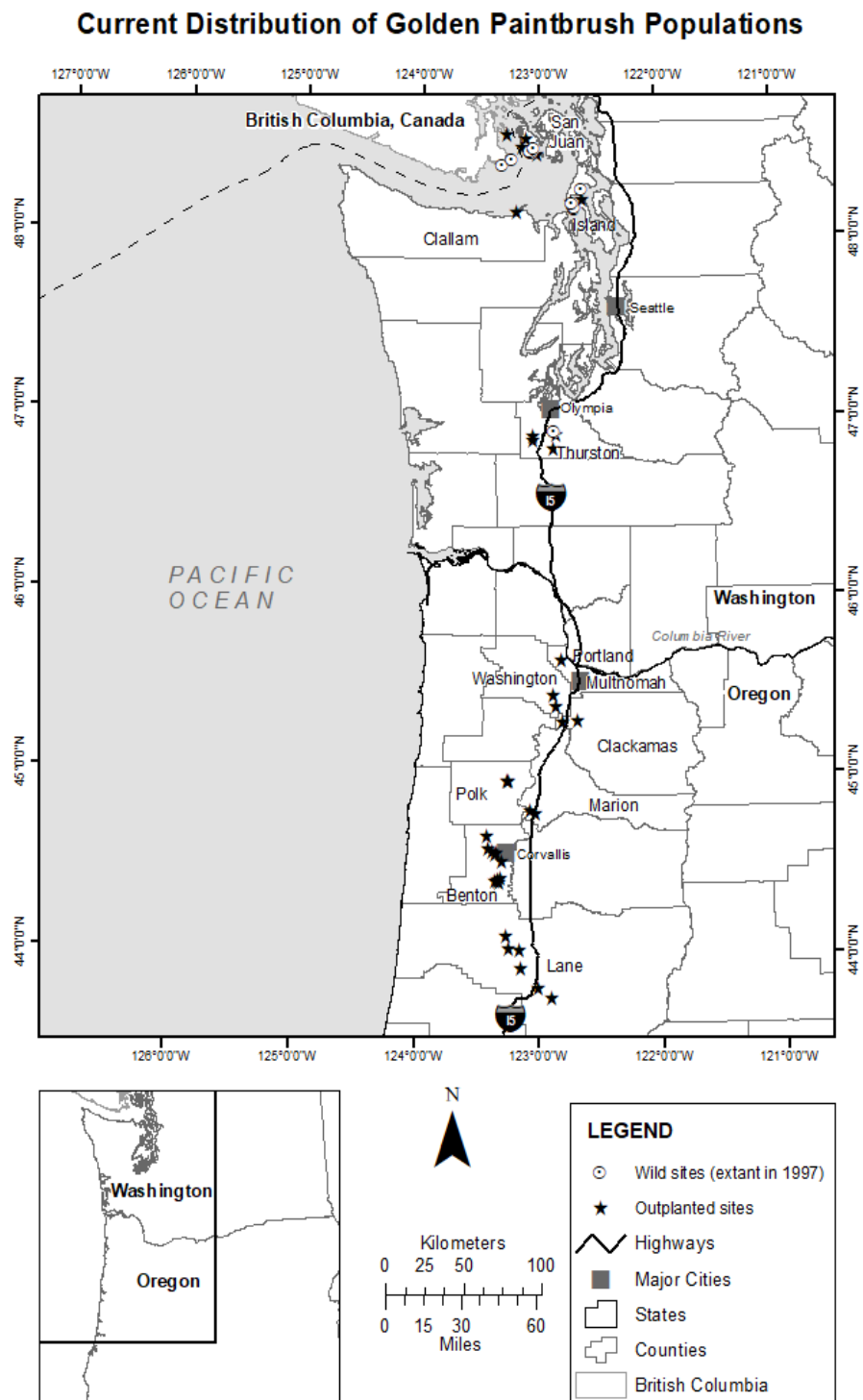


Figure 1. Extant sites (“populations”) of golden paintbrush across the species’ known range.

Trends in abundance for the golden paintbrush have been consistently monitored since 2004 (Fertig 2019, p. 14), with refinements to monitoring protocols made in 2008

and 2011 (Arnett 2011, entire). As a whole, abundance has substantially increased from approximately 11,500 flowering plants in 2011, to over 560,000 flowering plants counted in 2018 (Fertig 2019, pp. 9-12). We attribute this rapid increase in abundance to the development of direct seeding techniques for establishing new populations, as opposed to outplanting individual plants (or plugs) grown in greenhouses. Most of the sites in Washington and Oregon's Willamette Valley were established by incorporating direct seeding. The current population abundance is not necessarily reflective of the eventual long-term population level at a site; however, as a number of reestablished sites are going through a period of prairie development/progression and species succession. For example, at some reestablished sites, abundance initially increased over several years then dropped to about 15–20 percent of the peak abundance (Fertig 2019, pp. 10–11, 15–21). Drops in abundance are somewhat expected as the populations stabilize after direct seeding, and we anticipate that the long-term population level at these re-established sites will meet recovery criteria.

In contrast to the newly-established golden paintbrush sites, there has been a steady decline in overall abundance at the original wild sites (golden paintbrush occurrences that were extant at the time of listing) since about 2012. Abundance at these sites dropped from just over 15,500 flowering plants in 2012, to just over 5,600 flowering plants in 2018 (Fertig 2019, p. 11).

Recovery Criteria

Section 4(f) of the Act directs us to develop and implement recovery plans for the conservation and survival of endangered and threatened species unless we determine that such a plan will not promote the conservation of the species. Recovery plans must, to the maximum extent practicable, include “objective, measurable criteria which, when met, would result in a determination, in accordance with the provisions [of section 4 of the Act], that the species be removed from the list.”

Recovery plans provide a roadmap for us and our partners on methods of enhancing conservation and minimizing threats to listed species, as well as measurable criteria against which to evaluate progress towards recovery and assess the species' likely future condition. However, they are not regulatory documents and do not substitute for the determinations and promulgation of regulations required under section 4(a)(1) of the Act. A decision to revise the status of a species, or to delist a species is ultimately based on an analysis of the best scientific and commercial data available to determine whether a species is no longer an endangered species or a threatened species, regardless of whether that information differs from the recovery plan.

There are many paths to accomplishing recovery of a species, and recovery may be achieved without all of the criteria in a recovery plan being fully met. For example, one or more criteria may be exceeded while other criteria may not yet be accomplished. In that instance, we may determine that the threats are minimized sufficiently and that the species is robust enough that it no longer meets the definition of an endangered species or a threatened species. In other cases, we may discover new recovery opportunities after having finalized the recovery plan. Parties seeking to conserve the species may use these opportunities instead of methods identified in the recovery plan. Likewise, we may learn new information about the species after we finalize the recovery plan. The new information may change the extent to which existing criteria are appropriate for identifying recovery of the species. The recovery of a species is a dynamic process requiring adaptive management that may, or may not, follow all of the guidance provided in a recovery plan.

Here, we provide a summary of progress made toward achieving the recovery criteria for the golden paintbrush. More detailed information related to conservation efforts can be found below under **Summary of Biological Status and Threats**. We completed a final recovery plan for the golden paintbrush in 2000 (Service 2000, entire),

and later supplemented the plan for part of the species' range in 2010 (Service 2010, entire). The 2000 plan includes objective, measurable criteria for delisting; however, the plan has not been updated for 20 years, so some aspects of the plan may no longer reflect the best scientific information available for the golden paintbrush. For example, we did not anticipate the ability to rapidly establish large golden paintbrush populations through direct seeding at the time the recovery plan was developed.

Since about 2012, a significant increase in the number of new populations has occurred, because of direct seeding within the historical range in Washington and Oregon, with perhaps the most significant being the reestablishment of the golden paintbrush at a number of sites in Oregon's Willamette Valley, where the species was once extirpated. In addition to improved propagation techniques, substantial research has been conducted on the population biology, fire ecology, and restoration of the golden paintbrush (Dunwiddie *et al.* 2001, entire; Gamon 2001, entire; Kaye 2001, entire; Kaye and Lawrence 2003, entire; Swenerton 2003, entire; Wayne 2004, entire; WDNR 2004b, entire; Lawrence 2005, entire; Dunwiddie and Martin 2016, entire; Lawrence 2015, entire; Schmidt 2016, entire).

The results of these studies have been used to guide management of the species at sites being managed for native prairie and grassland ecosystems. Active management to promote the golden paintbrush is being done to varying degrees (from targeted to infrequent) across prairie and grassland sites. An active seed production program has been maintained to provide golden paintbrush seeds and other native prairie plant seeds to land managers for population augmentation and restoration projects across the species' range in Washington and Oregon. Additionally, as recommended by the recovery plan for the golden paintbrush (Service 2000, p. 31), the State of Washington prepared a reintroduction plan for the Service as both internal and external guidance (WDNR 2004a, entire).

Below are the delisting criteria described in the 2000 golden paintbrush recovery plan (Service 2000, p. 24), as supplemented in 2010, and the progress made to date in achieving each criterion.

Criterion 1 for Delisting

There are at least 20 stable populations distributed throughout the historical range of the species. To be deemed stable, a population must maintain a 5-year 'running' average population size of at least 1,000 individuals, where the actual count never falls below 1,000 individuals in any year. The golden paintbrush technical team recommended in the 2007 5-year status review that this criterion should be modified. Because it is impractical to count individual vegetative plants, the team recommended that the criterion should be modified to specifically account for a recovered population as equal to 1,000 flowering individuals and known to be stable or increasing as evidenced by population trends (Service 2007, p. 3). While we did not officially amend or make an addendum to the recovery plan to incorporate this recommendation, we accepted that this is the best way to count population abundance and more recent surveys (starting about 2007) for the species counted only flowering plants.

The Service supplemented this criterion in its 2010 recovery plan for the prairie species of western Oregon and southwestern Washington by identifying locations for golden paintbrush reintroductions, specifically to establish five additional populations distributed across at least three of the following recovery zones: Southwest Washington, Portland, Salem East, Salem West, Corvallis East, Corvallis West, Eugene East, and Eugene West. Priority was given to reestablishing populations in zones with historical records of golden paintbrush (Southwest Washington, Portland, Salem East, Corvallis East) (Service 2010, p. IV-37).

Progress: As of 2018, 23 populations averaged at least 1,000 individual plant per year over the 5-year period from 2013 to 2018. Of these 23 populations, 8 had a 5-year

running average of at least 1,000 individuals, and an additional 5 populations had a 3-year running average of at least 1,000 individuals between 2016 and 2018 (Hanson 2019, *in litt.*). While this does not meet the recovery criteria (of 20 such populations), we find that many of the species' populations are sufficiently resilient to make up for the smaller number of populations based on the following analysis. As noted above, we only count flowering plants during monitoring, so in most years a proportion of individual plants may not be represented in annual counts, because they are not flowering during surveys.

Six populations currently number in the tens of thousands of individuals, the largest totaling just over 224,000 flowering plants (Pigeon Butte on Finley National Wildlife Refuge) (Service 2019, pp. 28–29). Prior to listing, the largest known population totaled just over 15,000 individuals (Rocky Prairie Natural Area Preserve) (62 FR 31740; June 11, 1997). Although it is likely that a number of the more recently established populations are still undergoing some level of stabilization, population abundance at eight sites is significantly greater (approximately 10,000 or more flowering plants) than the 1,000 individual threshold established at the time of the drafting of the recovery plan for this species (Service 2019, pp. 12–13). Populations numbering in the tens of thousands of individuals have a significantly higher level of viability and significantly lower risk of extirpation than populations near 1,000 individuals.

Finally, there are now a minimum of 26 golden paintbrush populations in western Oregon's Willamette Valley, and these populations are distributed across at least three (Corvallis West, Salem West, Portland, Eugene West) of the recovery zones (Kaye 2019, pp. 11–23) identified in the 2010 supplement to the species' recovery plan (Service 2010, pp. IV-4, IV-37). Therefore, significant progress has been made toward achieving this criterion, and at some sites, the progress is well beyond numerical levels that were anticipated at the time of recovery criteria development. Although we acknowledge annual variability of abundance across sites, at least six sites across Washington and

Oregon number in the tens of thousands of individuals (Service 2019, pp. 12–13), which significantly surpasses the minimum 1,000 individual threshold. This increases our confidence that the overall viability of the species is secured, despite having fewer than 20 populations with a 5-year running average of at least 1,000 individuals. In addition, we now have the ability to rapidly create new populations through direct seeding, which is something that was not considered when we developed this recovery criterion.

Criterion 2 for Delisting

At least 15 populations over 1,000 individuals are located on protected sites. In order for a site to be deemed protected, it must be either owned and/or managed by a government agency or private conservation organization that identifies maintenance of the species as the primary management objective for the site, or the site must be protected by a permanent conservation easement or covenant that commits present and future landowners to the conservation of the species.

Progress: This recovery criterion has not been met as phrased in the recovery plan, because the primary management objective of the protected sites is not always to protect only golden paintbrush. However, we find that the goal of the criterion, a significant number of populations under conservation ownership protective of the species that are likely to be self-sustaining over time, has been greatly exceeded. Forty-five of the 48 golden paintbrush sites are in either public ownership, are owned by a conservation-oriented, nongovernmental organization, or are under conservation easement (Service 2019, p. 62). Such ownership is expected to protect sites from development and land use that would have long-term, wide-ranging deleterious effects on this species. Additionally, 37 sites currently have management practices that at least preserve essential characteristics of golden paintbrush habitat, and 24 sites have management plans and resources for their implementation for at least the next year (Service 2019, pp. 40, 42–44). Additionally, two of the five conservation easement sites

are also enrolled in the Service's Partners for Fish and Wildlife Program, which provides technical and financial assistance to private landowners to restore, enhance, and manage private land to improve native habitat. At least three sites in Washington and 14 sites in Oregon also support other prairie-dependent species currently listed as endangered or threatened, and another five are part of designated critical habitat for one of these species. Therefore, we anticipate prairie management or maintenance will be ongoing at these golden paintbrush sites for the foreseeable future. Two of the three extant sites in British Columbia that are managed by Parks Canada are also located within designated "ecological reserves" (Service 2019, p. 14). The level of management specific to golden paintbrush varies at each site, but all sites are generally being managed to conserve and/or restore native prairie or grassland habitats (for additional detail on species management status at sites, see discussion under **Summary of Biological Status and Threats**, Factor A, below).

Criterion 3 for Delisting

Genetic material, in the form of seeds adequately representing the geographic distribution or genetic diversity within the species, is stored in a facility approved by the Center for Plant Conservation.

Progress: This recovery criterion is met. Seeds are being stored at two approved facilities, the Rae Selling Berry Seed Bank at Portland State University and the Miller Seed Vault at the University of Washington Botanic Garden. In addition, the active seed production programs at Center for Natural Lands Management and the Institute for Applied Ecology continue to provide golden paintbrush seeds to land managers for population augmentation and prairie restoration projects. Production programs were started using seeds from nearly all the extant populations at the time of listing to maintain existing genetic diversity across the historical range and to allow for the greatest opportunity for local adaptation at reintroduction sites.

Criterion 4 for Delisting

Post-delisting monitoring of the condition of the species and the status of all individual populations is ready to begin.

Progress: We have developed a draft post-delisting monitoring plan in cooperation with our lead State partner in Washington, Washington Department of Natural Resources (WDNR) and in Oregon, Oregon Department of Agriculture. The draft post-delisting monitoring plan is available for public review on <http://www.regulations.gov> under Docket No. FWS–R1–ES–2020–0060. We anticipate that the WDNR’s Natural Heritage Program would coordinate future monitoring of the golden paintbrush if the species is delisted. In the post-delisting monitoring plan, we propose to monitor, at a minimum, all populations established and counted in 2018 that were identified in the species biological report (Service 2019, pp. 12–13). These populations would be monitored every other year after final delisting for a 5-year period (i.e., years 1, 3, and 5). Several key prairie conservation partners may choose to monitor these golden paintbrush sites more frequently and may also choose to monitor additional golden paintbrush sites as more become established across the range in Oregon and Washington. Parks Canada oversees periodic monitoring of the three extant populations within British Columbia, Canada. Therefore, this recovery criterion is met.

Criterion 5 for Delisting

Post-delisting procedures for the ecological management of habitats for all populations have been initiated.

Progress: This criterion has not been met as phrased in the recovery plan, because procedures for ecological management for *all* populations are not in place. However, we find that the intent of this criterion has been met because a substantial proportion of known golden paintbrush sites—more than the 20 populations originally envisioned for these recovery criteria—meet this criterion. As described earlier,

significant strides have been made in the ecological management techniques for restoration and maintenance of prairie landscapes and the reintroduction and management of golden paintbrush at these and other sites. The current level of management varies across extant sites, influenced by need, conservation partner capacity, and funding availability. We anticipate ongoing management at a minimum of 37 of these sites, but note that the level of management will continue to vary across sites based on these same factors (Service 2019, pp. 40, 42–44) (see additional discussion regarding ongoing site management under **Summary of Biological Status and Threats**, Factor A, below). The most actively managed sites may include plantings, fencing, prescribed fire, herbicide use for weed control, mowing, and controlled public use. As described above under “*Criterion 2 for Delisting*,” at least 17 sites currently contain multiple, prairie-dependent species and an additional 5 sites are designated critical habitat for another prairie-dependent species. Those golden paintbrush sites that support multiple, prairie-dependent species listed under the Act are anticipated to receive the most consistent ecological management into the future. While this recovery criterion has not been fully achieved (i.e., not *all* populations have post-delisting management procedures in place), ecological management of habitat is expected to occur on the vast majority of the known sites and management will occur on far more than the originally projected 15 sites identified above under “*Criterion 2 for Delisting*”

With the more recently identified threat of hybridization from harsh paintbrush (*Castilleja hispida*), additional measures are being implemented and refined to address the impacts to golden paintbrush on contaminated sites and prevent the spread of harsh paintbrush to uncontaminated golden paintbrush sites. The Service has developed a strategy and guidance document for securing golden paintbrush sites and has signed a memorandum of understanding (MOU) with prairie conservation partners to ensure hybridization is contained and the conservation strategy is followed to benefit golden

paintbrush while supporting recovery of other sympatric (occurring within the same geographical area) prairie species listed under the Act (Service *et al.* 2020) (for more on the conservation strategy, see discussion under **Summary of Biological Status and Threats**, Factor E, below).

Regulatory and Analytical Framework

Regulatory Framework

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species is an “endangered species” or a “threatened species.” The Act defines an endangered species as a species that is “in danger of extinction throughout all or a significant portion of its range,” and a threatened species as a species that is “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” The Act requires that we determine whether any species is an “endangered species” or a “threatened species” because of any of the following factors:

- (A) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) Overutilization for commercial, recreational, scientific, or educational purposes;
- (C) Disease or predation;
- (D) The inadequacy of existing regulatory mechanisms; or
- (E) Other natural or manmade factors affecting its continued existence.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species’ continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects.

We use the term “threat” to refer in general to actions or conditions that are known to or are reasonably likely to negatively affect individuals of a species. The term “threat” includes actions or conditions that have a direct impact on individuals (direct impacts), as well as those that affect individuals through alteration of their habitat or required resources (stressors). The term “threat” may encompass—either together or separately—the source of the action or condition or the action or condition itself.

However, the mere identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an “endangered species” or a “threatened species.” In determining whether a species meets either definition, we must evaluate all identified threats by considering the species’ expected response and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species, such as any existing regulatory mechanisms or conservation efforts. The Secretary determines whether the species meets the definition of an “endangered species” or a “threatened species” only after conducting this cumulative analysis and describing the expected effect on the species now and in the foreseeable future.

The Act does not define the term “foreseeable future,” which appears in the statutory definition of “threatened species.” Our implementing regulations at 50 CFR 424.11(d) set forth a framework for evaluating the foreseeable future on a case-by-case basis. The term foreseeable future extends only so far into the future as we can reasonably determine that both the future threats and the species’ responses to those threats are likely. In other words, the foreseeable future is the period of time in which we can make reliable predictions. “Reliable” does not mean “certain”; it means sufficient to

provide a reasonable degree of confidence in the prediction. Thus, a prediction is reliable if it is reasonable to depend on when making decisions.

It is not always possible or necessary to define foreseeable future as a particular number of years. Analysis of the foreseeable future uses the best scientific and commercial data available and should consider the timeframes applicable to the relevant threats and to the species' likely responses to those threats in view of its life-history characteristics. Data that are typically relevant to assessing the species' biological response include species-specific factors such as lifespan, reproductive rates or productivity, certain behaviors, and other demographic factors.

For species that are already listed as endangered or threatened species, this analysis of threats is an evaluation of both the threats currently facing the species and the threats that are reasonably likely to affect the species in the foreseeable future following the delisting or downlisting and the removal of the Act's protections. A recovered species is one that no longer meets the Act's definition of an endangered species or a threatened species. For the golden paintbrush, we consider 30 years to be a reasonable period of time within which reliable predictions can be made for stressors and species' response. This time period includes multiple generations of the golden paintbrush, generally includes the term of and likely period of response to many of the management plans for the species and/or its habitat, and encompasses planning horizons for prairie habitat conservation efforts (e.g., Dunwiddie and Bakker 2011, pp. 86–88; Service 2011, entire; Altman *et al.* 2017, pp. 6, 20); additionally, various global climate models and emission scenarios provide consistent predictions within that timeframe (IPCC 2014, p. 11). We consider 30 years a relatively conservative timeframe in view of the long-term protection afforded to 93 percent of the species' occupied sites (45 of 48), which occur on conserved/protected lands (Service 2019, p. 62).

Analytical Framework

The species biological report documents the results of our comprehensive biological review of the best scientific and commercial data regarding the status of the species. The report does not represent our decision on whether the species should be reclassified as a threatened species under the Act. It does, however, provide the scientific basis that informs our regulatory decisions, which involve the further application of standards within the Act and its implementing regulations and policies. The following is a summary of the key results and conclusions from the report, which can be found at Docket FWS–R1–ES–2020–0060 on <http://www.regulations.gov>.

To assess golden paintbrush viability, we used the three conservation biology principles of resiliency, redundancy, and representation (Shaffer and Stein 2000, pp. 306–310). Briefly, resiliency supports the ability of the species to withstand environmental and demographic stochasticity (for example, wet or dry, warm or cold years); redundancy supports the ability of the species to withstand catastrophic events (for example, droughts, large pollution events), and representation supports the ability of the species to adapt over time to long-term changes in the environment (for example, climate changes). In general, the more resilient and redundant a species is and the more representation it has, the more likely it is to sustain populations over time, even under changing environmental conditions. Using these principles, we identified the species' ecological requirements for survival and reproduction at the individual, population, and species levels, and described the beneficial and risk factors influencing the species' viability. We use this information to inform our regulatory decision.

Summary of Biological Status and Threats

In this section, we review the biological condition of the species and its resources, and the threats that influence the species' condition in order to assess the species' overall viability and the risks to that viability. The following potential threats were identified for this species at the time of listing: (1) Succession of prairie and grassland habitats to shrub

and forest lands (due to fire suppression, interspecific competition, and invasive species); (2) development of property for commercial, residential, and agricultural use; (3) low potential for expansion and refugia due to constriction of habitat (from surrounding development or land use); (4) recreational picking (including associated trampling); and (5) herbivory (on plants and seeds) (62 FR 31740; June 11, 1997). For our analysis, we assessed their influence on the current status of the species, as well as the influence of two potential threats not considered at the time of listing, hybridization of golden paintbrush with harsh paintbrush, and the impacts of climate change. We also assessed current voluntary and regulatory conservation mechanisms relative to how they reduce or ameliorate existing threats to golden paintbrush.

Habitat loss

At the time of listing, the principal cause of ongoing habitat loss was succession of prairie and grassland habitats to shrub and forest due to fire suppression, interspecific competition, and invasive species (62 FR 31740; June 11, 1997). The potential for development at, or surrounding, extant sites for commercial, residential, and agricultural purposes also posed a threat to the golden paintbrush at the time of listing. Both of these threat factors were preventing or limiting extant populations from expanding and recruiting into new or adjacent areas and afforded no refugia for the species in the case of catastrophic events.

Currently, ongoing prairie or grassland management or maintenance occurs at the majority of extant golden paintbrush sites. This management includes removal or suppression of trees and both native and nonnative woody shrubs, as well as control of nonnative, invasive grassland plant species through a number of different approaches according to species (e.g., mowing, prescribed fire, mechanical removal, selective-herbicide application, restoration reseeding, etc.). At least 24 of the 48 sites have prairie or grassland management plans in place for the next 3 or more years. An additional 13

sites that lack a long-term management plan for the golden paintbrush receive basic maintenance to preserve the prairie characteristics of golden paintbrush habitat (Service 2019, pp. 42–44). Three golden paintbrush sites in Washington also currently support other prairie- or grassland-dependent species listed under the Act—the endangered Taylor’s checkerspot butterfly (*Euphydryas editha taylori*) and three subspecies of Mazama pocket gopher (*Thomomys mazama* spp.) (Olympia pocket gopher (*Thomomys mazama pugetensis*), Tenino pocket gopher (*Thomomys mazama tumuli*), and Yelm pocket gopher (*Thomomys mazama yelmensis*))—while an additional five sites are included in designated critical habitat for the Taylor’s checkerspot butterfly.

Although these five critical habitat sites are currently unoccupied by the butterfly, they were designated because they were found to be essential to the conservation of Taylor’s checkerspot butterfly (78 FR 61452; October 3, 2013). Specifically, these areas will be managed in a way that is conducive for eventual reintroduction of Taylor’s checkerspot butterflies, which will maintain the prairie ecosystem characteristics that are supportive of long-term conservation of the golden paintbrush. In addition, at least 14 golden paintbrush sites in Oregon’s Willamette Valley currently support one or more other prairie- or grassland-dependent species listed under the Act—the endangered Fender’s blue butterfly (*Icaricia icarioides fenderi*), endangered Willamette daisy (*Erigeron decumbens*), threatened Kincaid’s lupine (*Lupinus oreganus* var. *kincaidii*, listed as *Lupinus sulphureus* ssp. *kincaidii*), and threatened Nelson’s checker-mallow (*Sidalcea nelsoniana*) (Institute for Applied Ecology 2019, *in litt.*).

We expect a number of these golden paintbrush sites in both Washington and Oregon to continue to be managed in a way that supports the recovery of other prairie- or grassland-dependent species in addition to the long-term conservation of the golden paintbrush. As long as periodic management or maintenance continues to occur at golden paintbrush sites across the species’ range, the threat of prairie or grassland succession is

expected to remain adequately addressed into the foreseeable future. State and Federal management plans include specific objectives to continue to protect and conserve the golden paintbrush at a number of sites (see Factor D discussion, below). States, Federal agencies, and conservation organizations have invested significant resources into golden paintbrush recovery, as well as general prairie and grassland restoration and conservation for a variety of at-risk prairie-dependent species. We do not anticipate habitat for these prairie-dependent species to contract further given the limited amount of remaining prairie habitat and the long-term investments conservation partners have made, and continue to make, to restore, rebuild, maintain, and conserve these relatively rare regional ecosystems (Dunwiddie and Bakker 2011, *entire*; Center of Natural Lands Management 2012, *in litt.*, *entire*; The News Tribune 2014, *in litt.*; Altman *et al.* 2017, *entire*; The Nature Conservancy 2019, *in litt.*, *entire*).

Golden paintbrush now occurs at 48 separate sites, as a result of the numerous reintroduction efforts implemented to recover this species. Only three of these sites are on lands possibly subject to future development. The remaining 45 sites are all under some type of public or conservation ownership (Service 2019, pp. 11–14). Of the 48 extant sites, at least 81 percent (n=39) are on land with some known level of protected status (at a minimum, formally protected as a natural area or other such designation, although not all of these designations are permanent) (Service 2019, pp. 42–44). In addition, of the 39 sites with some protected land status, 19 also include stipulations for, or statements of specific protection of, perpetual management of the golden paintbrush.

Although the total area occupied by the golden paintbrush at 19 sites is relatively small (less than 0.4 hectare (ha) (1 acre (ac))), 14 sites have from between 2 to 18.6 occupied ha (5 to 46 ac) (Service 2019, pp. 37–38). All but four sites have available land for future golden paintbrush population expansion or shifts in distribution. Of the 34 sites with less than 2 ha (5 ac) of occupied habitat, 10 have an estimated range of 0.8 to 2

ha (2 to 5 ac) of additional habitat for expansion, and at least 13 have an estimated range of 2 to 6 ha (5 to 15 ac) of additional habitat for future expansion (Service 2019, pp. 37–38). In addition, the species is much less reliant on expanding site-use and refugia than at the time of listing, when only 10 extant sites of the golden paintbrush remained. The reintroduction and seed production techniques developed for golden paintbrush recovery have provided the means to more easily establish or reestablish populations at prairie restoration sites. Many of these sites have been specifically acquired for their potential overall size, conservation value, and conservation status. The golden paintbrush has been reintroduced and established at prairie restoration sites that are well distributed across the species' historical range, well beyond the 10 extant sites at the time of listing. As a result of these conditions, we do not anticipate development in or around these sites to become a threat to the golden paintbrush in the foreseeable future.

Recreational picking and trampling

At the time of listing, we considered overutilization from recreational picking (flowers) to be a threat (62 FR 31740; June 11, 1997). Our concern with recreational picking or collection of flowers was that it would reduce overall potential seed-set at a site. Concern has also been noted regarding the direct harvesting of seed capsules (Dunwiddie in litt. 2018). Although there is evidence of occasional recreational or possible commercial collection of capsules that reduced the amount of seed available on a site, collection is no longer considered a significant stressor to the species across its range (Service 2019, p. 47). In addition, the current number of established and protected golden paintbrush sites, many with limited or restricted access, largely ameliorates this previously identified threat. We acknowledge that the golden paintbrush is likely a desirable species for some gardeners or plant collectors. However, if delisted, golden paintbrush seeds or plants are likely to become available through controlled sale to the public from regional prairie conservation partners and/or regional native plant nurseries,

similar to what occurs with other non-listed prairie plant species. For these reasons, we do not expect the possible collection of golden paintbrush flowers or seeds to become a threat to the species in the foreseeable future.

At the time of listing, we identified trampling of golden paintbrush plants by recreationalists as impacting the species at some sites with high levels of public use, especially where and when associated with recreational picking of golden paintbrush flowers. Although some risk of trampling to plants will always be present across public sites (e.g., State parks, national wildlife refuges), most sites often have some level of restricted access when golden paintbrush plants are in bloom (e.g., fenced from deer or inaccessible to the public) or there are defined walking or viewing areas. Therefore, when compared with the potential impact of trampling at the time of listing, the current impact is likely insignificant, due to the number of reestablished golden paintbrush sites, the large size of many of these sites, and considerable abundance of golden paintbrush plants at some of these sites. For the above reasons, we also do not anticipate that trampling will become a threat in the foreseeable future.

Herbivory

At the time of listing, we considered predation (herbivory) on the golden paintbrush by native (voles and deer) and introduced (rabbits) species to be a threat to the plant (62 FR 31740; June 11, 1997). Deer continue to exhibit significant herbivory on the golden paintbrush at some sites; however, there is annual and site-specific variability in the overall level of herbivory (Service 2019, p. 48). Herbivory impacts from voles on the golden paintbrush have not been broadly or consistently observed and also appear to be variable across sites and years. Where herbivory by deer and/or rabbits has been significant, control with fencing has been successfully implemented, but controlling herbivory through fencing over large areas is limited by cost (Service 2019, p. 48). In addition, encouraging localized reduction of deer populations through lethal removal near

some sites (Washington Department of Fish and Wildlife 2019, *in litt.*; Pelant 2019, *in litt.*) and installing raptor perch poles to control rodents and rabbits at some sites are also being implemented to reduce impacts of herbivory on the golden paintbrush (Service 2019, p. 48). As a consequence of the significant increase in the number of golden paintbrush sites that have been successfully established since the species was listed, and because the impact of herbivory is being successfully managed in at least a portion of those sites where noted as significant (potential site/population level effect), we conclude predation (herbivory) no longer has a significant impact across the majority of the golden paintbrush's 48 sites/populations, nor at the species level, and is unlikely to become a threat to the species in the foreseeable future.

Hybridization

A potential threat to the golden paintbrush identified after the species was listed in 1997 was the impact of hybridization with the harsh paintbrush (*Castilleja hispida*). The harsh paintbrush is one of the host plants introduced to prairie sites targeted for endangered Taylor's checkerspot butterfly recovery efforts. Our 2007 5-year status review recommended "the evaluation of the potential for genetic contamination of golden paintbrush populations by hybridization with other species of *Castilleja*" (Service 2007, p. 15). After initial evaluation, the potential risk of hybridization was considered relatively low and manageable (Kaye and Blakeley-Smith 2008, p. 13). However, after further evaluation and additional observations in the field, hybridization with the harsh paintbrush has now been identified as a significant potential threat to golden paintbrush populations where the two species occur together or in close proximity (Clark 2015, entire; Sandlin 2018, entire). Three former golden paintbrush recovery sites have now been discounted by the Service for the purposes of recovery due to the level of hybridization at these sites (Service 2019, p. 15). At least one other site is currently vulnerable to the effects of hybridization, but management efforts to date (removal of

plants that exhibit hybrid characteristics and creation of a zone of separation between harsh paintbrush and golden paintbrush areas at the site) have seemingly preserved this golden paintbrush population. Currently, hybridization appears to be confined to those areas located in the south Puget Sound prairie region where both species of *Castilleja* were used at some of the same habitat restoration sites. The only known incident of hybridization outside of this region was at Steigerwald Lake National Wildlife Refuge in southwestern Washington, where we unknowingly used a seed mix that included the harsh paintbrush. This site has since been eradicated of both *Castilleja* species, but we anticipate reintroducing the golden paintbrush to the site in the future (Ridgefield National Wildlife Refuge Complex 2019, *in litt.*, entire).

As a response to this emerging threat, efforts were implemented, and are ongoing, to reduce or eliminate the risk of hybridization to the golden paintbrush. These include efforts such as maintaining isolated growing areas for the golden paintbrush and harsh paintbrush at native seed production facilities used in prairie restoration efforts, maintaining buffers between golden paintbrush and harsh paintbrush patches at sites where both species are currently present, and delineating which of the two species will be used at current and future prairie conservation or restoration sites. We recently developed a strategy and guidance document for securing golden paintbrush sites to address containment of hybridization at existing contaminated sites and prevention of unintentional spread of hybridization to other regions within the golden paintbrush's range, specifically north Puget Sound and the Willamette Valley (Service *et al.* 2020). We have also entered into an associated MOU with the Washington Department of Fish and Wildlife and WDNR to ensure the strategy is implemented as agreed to by all prairie conservation partners in the range of the golden paintbrush. The three agencies have authority over these species and will oversee most prairie restoration efforts in Washington, particularly in south Puget Sound. This MOU is expected to facilitate

awareness and compliance with the hybridization strategy and guidance by our prairie conservation partners. The formal adoption and implementation of the hybridization strategy and guidance is expected to prevent hybridization from becoming a threat to the golden paintbrush in the foreseeable future.

Climate Change

At the time of listing, the potential impacts of climate change on the golden paintbrush was not discussed. The term “climate” refers to the mean and variability of relevant quantities (i.e., temperature, precipitation, wind) over time (IPCC 2014, pp. 119–120). The term “climate change” thus refers to a change in the mean or variability of one or more measures of climate (e.g., temperature or precipitation) that persists for an extended period, typically decades or longer, whether the change is due to internal processes or anthropogenic changes (IPCC 2014, p. 120).

Scientific measurements spanning several decades demonstrate that changes in climate are occurring. In particular, warming of the climate system is unequivocal, and many of the observed changes in the last 60 years are unprecedented over decades to millennia (IPCC 2014, p. 2). The current rate of climate change may be as fast as any extended warming period over the past 65 million years and is projected to accelerate in the next 30 to 80 years (National Research Council 2013, p. 5). Thus, rapid climate change is adding to other sources of extinction pressures, such as land use and invasive species, which will likely place extinction rates in this era among just a handful of the severe biodiversity crises observed in Earth’s geological record (AAAS 2014, p. 7).

Global climate projections are informative, and in some cases, the only or the best scientific information available for us to use. However, projected changes in climate and related impacts can vary substantially across and within different regions of the world (e.g., IPCC 2013, 2014; entire) and within the United States (Melillo *et al.* 2014, entire). Therefore, we use “downscaled” projections when they are available and have been

developed through appropriate scientific procedures, because such projections provide higher resolution information that is more relevant to spatial scales used for analyses of a given species (see Glick *et al.* 2011, pp. 58–61, for a discussion of downscaling).

Climate change trends predicted for the Pacific Northwest (Oregon, Washington, Idaho, and Montana) broadly consist of an increase in annual average temperature; an increase in extreme precipitation events; and, with less certainty, variability in annual precipitation (Dalton *et al.* 2013, pp. 31–38, Figure 1.1; Snover *et al.* 2013, pp. 5-1–5-4).

According to the NatureServe Climate Vulnerability Index, the golden paintbrush has experienced mean annual precipitation variation over the last 50 years ranging from 53 cm to 130 cm (21 to 51 in), resulting in a rating of “Somewhat Decreased Vulnerability” to climate change (Young *et al.* 2011, pp. 26-27; Gamon 2014, pp. 1, 5; Climate Change Sensitivity Database 2014, *in litt.*, p. 4). Prolonged or more intense summer droughts are likely to increase in the Pacific Northwest due to climate change (Snover *et al.* 2013, p. 2-1). Even though the golden paintbrush senesces as the prairies dry out in the summer, increased intensity or length of drought conditions will likely stress plants and increase mortality, resulting in reduced numbers of individuals in populations at less-than-optimal sites (Kaye 2018, *in litt.*).

As is the case with all stressors we assess, even if we conclude that a species is currently affected or is likely to be affected in a negative way by one or more climate-related impacts, it does not necessarily follow that the species meets the definition of an “endangered species” or a “threatened species” under the Act. Knowledge regarding the vulnerability of the species to, and known or anticipated impacts from, climate-associated changes in environmental conditions can be used to help devise appropriate conservation strategies.

Predicted environmental changes resulting from climate change may have both positive and negative effects on the golden paintbrush, depending on the extent and type

of impact and depending on site-specific conditions within each habitat type. The primary predicted negative effect is drought conditions resulting in inconsistent growing seasons. This effect will likely be buffered by the ability of the golden paintbrush to survive in a range of soil conditions, with a number of different host plants, and under a range of precipitation levels. We have not identified any predicted environmental effects from climate change that may be positive for the golden paintbrush at this time. Climate change could result in a decline or change in bumble bee diversity within the range of the golden paintbrush (Soroye *et al.* 2020, entire); the bumble bee is an important pollinator for the golden paintbrush. However, there are limited data at this time to indicate this is a specific and present threat to the golden paintbrush.

In summary, climate change is affecting, and will continue to affect, temperature and precipitation events within the range of the golden paintbrush. The extent, duration, and impact of those changes are unknown, but could potentially increase or decrease precipitation in some areas. The golden paintbrush may experience climate change-related effects in the future, most likely at the individual or local population scale. Regional occurrences may experience some shifts; however, we anticipate the species will remain viable, because: (1) It is more resilient than at the time of listing as a result of increased geographic distribution in a variety of ecological settings; (2) available information indicates the golden paintbrush is somewhat adaptable to some level of future variation in climatic conditions (Service 2019, pp. 22–25, 45); (3) there are ongoing efforts to expand the golden paintbrush to additional suitable sites; and (4) we now have the technical ability to readily establish populations, which could help to mitigate any future population losses. Therefore, based upon the best available scientific and commercial information, we conclude that climate change does not currently pose a significant threat, nor is it likely to become a significant threat in the foreseeable future (next 30 years), to the golden paintbrush.

Voluntary and Regulatory Conservation Mechanisms

Section 4(b)(1)(A) of the Act requires the Service to take into account “those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation, to protect such species.” We interpret this language to require us to consider relevant Federal, State, and Tribal laws, regulations, and other such mechanisms that may minimize any of the threats or otherwise enhance conservation of the species. We give the strongest weight to statutes and their implementing regulations and to management direction that stems from those laws and regulations; an example would be State governmental actions enforced under a State statute or constitution or Federal action under the statute.

For currently listed species, we consider existing regulatory mechanisms relative to how they reduce or ameliorate threats to the species absent the protections of the Act. Therefore, we examine whether other regulatory mechanisms would remain in place if the species were delisted, and the extent to which those mechanisms will continue to help ensure that future threats will be reduced or eliminated. At the time of listing (62 FR 31740; June 11, 1997), we noted that habitat management for the golden paintbrush was not assured, despite the fact that most populations occurred in areas designated as reserves or parks that typically afforded the golden paintbrush and its habitat some level of protection through those designations. As discussed in our species biological report (Service 2019), the threat of habitat loss from potential residential or commercial development has decreased since the time of listing due to the establishment of new golden paintbrush populations on protected sites. Although a few privately owned sites are still at some potential risk, development is no longer considered a significant threat to the viability of the golden paintbrush due to the number of sites largely provided protection from development (Service 2019, pp. 12–14).

Federal

National Environmental Policy Act—The National Environmental Policy Act requires Federal agencies to consider the environmental effects of their proposed actions (NEPA; 42 U.S.C. 4321 *et seq.*). Federal agency NEPA analyses may identify and disclose potential effects of Federal actions on the golden paintbrush if the species is delisted. However, NEPA does not require that adverse impacts be mitigated, only disclosed. Therefore, it is unclear what level of protection would be conveyed to the golden paintbrush through NEPA, in the absence of protections under the Act.

Sikes Act—One golden paintbrush site currently occurs on a Federal military installation (Forbes Point, Naval Air Station Whidbey Island in Island County, Washington) and is managed under an integrated natural resources management plan (INRMP) (USDOD 2012, pp. 4–6) authorized by the Sikes Act (16 U.S.C. 670 *et seq.*). Special management and protection requirements for golden paintbrush habitat in the INRMP include maintenance of a 10-ac management area for the species, including maintaining and improving a fence around the population to exclude both people and herbivores, posting signs that state the area is accessible to “authorized personnel only,” mowing and hand-cutting competing shrubs from the area, outplanting nursery-grown plants from seeds previously collected on site, and implementing additional habitat management actions that are identified in the future to enhance the golden paintbrush population such as control burns or herbicide control of competing vegetation (USDOD 2012, pp. 3–5). These protections are effective in protecting the golden paintbrush on this site and are expected to continue in the absence of protections under the Act because the Sikes Act mandates the Department of Defense to conserve and rehabilitate wildlife, fish, and game on military reservations.

National Wildlife Refuge System Improvement Act—Ten golden paintbrush sites currently occur on National Wildlife Refuge (NWR) lands (Dungeness NWR in Washington, and Ankeny, William L. Finley, Tualatin River, and Baskett Slough NWRs

in Oregon). As directed by the National Wildlife Refuge System Improvement Act of 1997 (Pub. L. 105–57), refuge managers have the authority and responsibility to protect native ecosystems, fulfill the purposes for which an individual refuge was founded, and implement strategies to achieve the goals and objectives stated in management plans. For example, William L. Finley NWR (Benton County, Oregon) includes extensive habitat for the golden paintbrush, including four known occupied sites, while a number of additional NWRs in Oregon (Ankeny NWR, Marion County; Tualatin River NWR, Washington County; and Baskett Slough NWR, Polk County) and Washington (Dungeness NWR, Clallam County) each also support at least one golden paintbrush occupied site.

The Willamette Valley comprehensive conservation plan (CCP) for William L. Finley, Ankeny, and Baskett Slough NWRs is a land management plan finalized in 2011 with a 15-year term that directs maintenance, protection, and restoration of the species and its habitat and identifies specific objectives related to establishment of populations and monitoring, as well as related habitat maintenance/management (Service 2011, pp. 2-45–2-46, 2-66–2-70). Given the 15-year timeframe of CCPs, these protections would remain in place until at least 2026, regardless of the golden paintbrush’s Federal listing status.

Tualatin River NWR finalized a CCP in 2013, and although it does not have conservation actions specific to the golden paintbrush identified in the plan, it does have maintenance and management activities for oak savanna habitat on the NWR, which supports the golden paintbrush (Service 2013a, pp. 4-9–4-10). These activities include various methods (e.g., mechanical and chemical) for reducing encroachment of woody species, controlling nonnative and invasive plant species, and reestablishing native grasses and forbs. Given the 15-year timeframe of CCPs, protections outlined in the

Tualatin River NWR CCP are expected to remain in place until at least 2028, regardless of the golden paintbrush's Federal listing status.

Dungeness NWR also finalized a CCP in 2013 (Service 2013b, entire). The CCP does not have any conservation actions specific to the golden paintbrush identified; however, it does identify general actions taken to control nonnative and invasive plant species that invade habitats on the refuge, including those inhabited by the golden paintbrush (Service 2013b, pp. 4-44–4-45). The golden paintbrush site at this NWR's headquarters continues to be maintained and protected. In addition to specific protections for the golden paintbrush provided under CCPs, the species is permanently protected by the mission of all NWRs to manage their lands and waters for the conservation of fish, wildlife, and plant resources and their habitats.

National Park Service Organic Act—One golden paintbrush site currently occurs on National Park Service (NPS) lands (American Camp, San Juan Island National Historical Park, Washington). The NPS Organic Act of 1916, as amended (39 Stat. 535), states the NPS shall promote and regulate the use of the National Park system “to conserve the scenery, natural and historic objects, and wild life” therein, to provide for the enjoyment of the same in such manner and by such means “as will leave them unimpaired for the enjoyment of future generations” (54 U.S.C. 100101(a)). Further, in title 36 of the Code of Federal Regulations (CFR) at § 2.1(a)(1)(i) and (a)(1)(ii), NPS regulations specifically prohibit possessing, destroying, injuring, defacing, removing, digging, or disturbing from its natural state living or dead wildlife, fish, or plants, or parts or products thereof, on lands under NPS jurisdiction. This prohibition extends to the golden paintbrush where it exists on NPS-managed lands. In addition, the General Management Plan for the San Juan Island National Historical Park includes the NPS's goal of restoring a prairie community that support functions and values of native habitat,

including habitat for native wildlife and rare species, such as the golden paintbrush (NPS 2008, p. 249).

Endangered Species Act—The golden paintbrush often co-occurs with other plant and animal species that are listed under the Act, such as the endangered Willamette daisy and endangered Taylor’s checkerspot butterfly. Therefore, some of the general habitat protections (e.g., section 7 consultation and ongoing recovery implementation efforts, including prairie habitat restoration, maintenance, and protection) for these other prairie-dependent, listed species will indirectly extend to some golden paintbrush sites if we delist the golden paintbrush.

Protections in Canada—The golden paintbrush in Canada is currently federally listed as “endangered” under the Species at Risk Act (SARA) (COSEWIC 2007, entire). SARA regulations protect species from harm, possession, collection, buying, selling, or trading (Statutes of Canada 2002, c. 29). SARA also prohibits damage to or destroying the habitat of a species that is listed as an endangered species. The population at Trial Island is on Canadian federal lands protected under SARA (COSEWIC 2011, *in litt.*, p. 5). The golden paintbrush is not currently protected under any provincial legislation in British Columbia. However, the golden paintbrush occurs in the ecological reserves that include Trial Island and Alpha Islet, which are protected under the British Columbia Park Act (COSEWIC 2011, *in litt.*, p. 5). The British Columbia Park Act allows lands identified under the Ecological Reserve Act to be regulated to restrict or prohibit any use, development, or occupation of the land or any use or development of the natural resources in an ecological reserve (Revised Statutes of British Columbia 1996, c. 103). This includes particular areas where rare or endangered native plants and animals in their natural habitat may be preserved.

State

Washington Natural Heritage Plan—Washington State’s Natural Heritage Plan identifies priorities for preserving natural diversity in Washington State (WDNR 2018, entire). The plan aids WDNR in conserving key habitats that are currently imperiled, or are expected to be imperiled in the future. The prioritization of conservation efforts provided by this plan is expected to remain in place if we delist the golden paintbrush. The golden paintbrush is currently identified as a priority 2 species (species likely to become endangered across their range or in Washington within the foreseeable future) in the State’s 2018 plan (WDNR 2018a, *in litt.* p. 4), which is a recent change from the species’ priority 1 designation (species are in danger of extinction across their range, including Washington) in 2011 (WDNR 2018b, *in litt.* p. 2). If we delist the golden paintbrush, WDNR may assign the species a priority 3 designation (species that are vulnerable or declining and could become threatened without active management or removal of threats to their existence) in the next iteration of their plan, which may result in WDNR expending less effort in the continued conservation of the golden paintbrush. However, we anticipate that WDNR will continue to monitor the species where it occurs on their own lands and more broadly as a partner in the post-delisting monitoring plan. We also anticipate that WDNR will continue to actively manage their golden paintbrush sites, because these areas are not only important to the long-term conservation of golden paintbrush, but also to other at-risk prairie species.

Washington State Park Regulations and Management—State park regulations, in general, require an evaluation of any activity conducted on a park that has the potential to damage park resources, and require mitigation as appropriate (Washington Administrative Code 2016, entire). Wildlife, plants, all park buildings, signs, tables, and other structures are protected; removal or damage of any kind is prohibited (Washington State Parks and Recreation Commission 2019, *in litt.*, p. 2). One golden paintbrush site currently exists on Fort Casey Historical State Park. One of the objectives for natural

resources on Fort Casey Historical State Park under the Central Whidbey State Parks Management Plan is to protect and participate in the recovery of the golden paintbrush, including protecting native plant communities, managing vegetative succession, and removing weeds through integrated pest management (Washington State Park and Recreation Commission 2008, p. 15). The plan further states that areas where the golden paintbrush occurs will be classified as “heritage affording a high degree of protection,” and the Nass Natural Area Preserve (also known as Admiralty Inlet Natural Area Preserve) is included in the long-term park boundary to also assure continued preservation of the golden paintbrush in this area (Washington State Park and Recreation Commission 2008, p. 26).

Oregon Revised Statutes (ORS), Chapter 564—Oregon Revised Statutes, chapter 564, “Wildflowers; Threatened or Endangered Plants,” requires State agencies to protect State-listed plant species found on their lands (Oregon Revised Statutes 2017, entire). Any land action on Oregon land owned or leased by the State, for which the State holds a recorded easement, and which results, or might result, in the taking of an endangered or threatened plant species, requires consultation with Oregon Department of Agriculture staff. The golden paintbrush is currently State-listed as endangered in Oregon. At this time, no populations of the golden paintbrush are known to occur on State lands in Oregon. However, should populations of the golden paintbrush occur on Oregon State lands in the future, the removal of Federal protections for the golden paintbrush would not affect State protection of the species under this statute.

In summary, conservation measures and existing regulatory mechanisms have minimized, and are continuing to address, the previously identified threats to the golden paintbrush, including habitat succession of prairie and grassland habitats to shrub and forest lands; development of property for commercial, residential, and agricultural use; recreational picking (including associated trampling); and herbivory (on plants and

seeds). As indicated above, we anticipate the majority of these mechanisms will remain in place regardless of the species' Federal listing status.

Cumulative Impacts

When multiple stressors co-occur, one may exacerbate the effects of the other, leading to effects not accounted for when each stressor is analyzed individually. The full impact of these synergistic effects may be observed within a short period of time, or may take many years before it is noticeable. For example, high levels of predation (herbivory) on the golden paintbrush by deer could cause large temporary losses in seed production in a population, but are not generally considered to be a significant threat to long-term viability; populations that are relatively large and well-distributed should be able to withstand such naturally occurring events. However, the relative impact of predation (herbivory) by deer may be intensified when it occurs in conjunction with other factors that may lessen the resiliency of golden paintbrush populations, such as prolonged woody species encroachment (prairie succession); extensive nonnative, invasive plant infestations; or possible increased plant mortality resulting from the effects of climate change (i.e., prolonged drought).

Although the types, magnitude, or extent of potential cumulative impacts are difficult to predict, we are not aware of any combination of factors that is likely to co-occur resulting in significant negative consequences for the species. We anticipate that any negative consequence of co-occurring threats will be successfully addressed through the same active management actions that have contributed to the ongoing recovery of the golden paintbrush and the conservation of regional prairie ecosystems that are expected to continue into the future.

Summary of Biological Status

To assess golden paintbrush viability, we evaluated the three conservation biology principles of resiliency, redundancy, and representation (Shaffer and Stein 2000, pp. 306–

310). We assessed the current resiliency of golden paintbrush sites (Service 2019, pp. 52-63) by scoring each site's management level, site condition, threats addressed, site abundance of plants, and site protection, resulting in a high, moderate, or low condition ranking. One-third of sites were determined to have a high condition ranking, one-third a moderate condition ranking, and one-third a low condition ranking (Service 2019, p. 63).

Golden paintbrush sites are well-distributed across the species' historical range and provide representation across the four distinct geographic areas within that range (British Columbia, North Puget Sound, South Puget Sound, and the Willamette Valley). Multiple sites or populations exist within each of these geographic areas, providing a relatively secure level of redundancy across the historical range, with the lowest level of redundancy within British Columbia. The resiliency of the golden paintbrush is more variable across the historical range given differences in site or population abundance, level of management at a site, and site condition, but overall most sites appear to be in moderate and high condition. The best scientific and commercial data available indicate that the golden paintbrush is composed of multiple populations, primarily in moderate to high condition (Service 2019, p. 63), which are sufficiently resilient, well-distributed (redundancy and representation), largely protected, and managed such that they will be relatively robust or resilient to any potential cumulative effects to which they may be exposed.

Determination of Golden Paintbrush Status

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations (50 CFR part 424) set forth the procedures for determining whether a species meets the definition of "endangered species" or "threatened species." The Act defines an endangered species as a species that is "in danger of extinction throughout all or a significant portion of its range," and a threatened species as a species that is "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."

For a more detailed discussion on the factors considered when determining whether a species meets the definition of an endangered species or a threatened species and our analysis on how we determine the foreseeable future in making these decisions, please see **Regulatory and Analytical Framework**.

Status Throughout All of Its Range

After evaluating threats to the species and assessing the cumulative effect of the threats under the section 4(a)(1) factors, we find, based on the best available information, and as described in our analysis above, stressors identified at the time of listing and several additional potential stressors analyzed for this assessment do not affect golden paintbrush to a degree that causes it to be in danger of extinction either now or in the foreseeable future. Development of property for commercial, residential, and agricultural use (Factor A), has not occurred to the extent anticipated at the time of listing and is adequately managed; existing information indicates this condition is unlikely to change in the future. Potential constriction of habitat for expansion and refugia (Factor A) also has not occurred to the extent anticipated at the time of listing, and existing information indicates this condition is unlikely to change in the future. Habitat modification through succession of prairie and grassland habitats to shrub and forest lands (Factor A) is adequately managed, and existing information indicates this condition is unlikely to change in the future. Recreational picking and associated trampling (Factor B) has not occurred to the extent anticipated at the time of listing; the species appears to tolerate current levels of this activity, and existing information indicates that this condition is unlikely to change in the future. Herbivory on plants and seeds (Factor C) has not occurred to the extent anticipated at the time of listing; the species appears to tolerate current levels of herbivory, and existing information indicates that this condition is unlikely to change in the future. Hybridization with the harsh paintbrush (Factor E) is adequately managed, and existing information indicates this condition is unlikely to

change in the future. Finally, golden paintbrush appears to tolerate the effects of climate change (Factor E), and existing information indicates that this condition is unlikely to change in the future. The existing regulatory mechanisms (Factor D) are sufficient to ensure protection of the species at the reduced levels of threat that remain.

Thus, after assessing the best available information, we determine that golden paintbrush is not in danger of extinction, or likely to become so in the foreseeable future, throughout all of its range.

Status Throughout a Significant Portion of Its Range

Under the Act and our implementing regulations, a species may warrant listing if it is in danger of extinction or likely to become so in the foreseeable future throughout all or a significant portion of its range. Having determined that the golden paintbrush is not in danger of extinction or likely to become so in the foreseeable future throughout all of its range, we now consider whether it may be in danger of extinction or likely to become so in the foreseeable future in a significant portion of its range—that is, whether there is any portion of the species’ range for which both (1) the portion is significant; and (2) the species is in danger of extinction now or likely to become so in the foreseeable future in that portion. Depending on the case, it might be more efficient for us to address the “significance” question or the “status” question first. We can choose to address either question first. Regardless of which question we address first, if we reach a negative answer with respect to the first question that we address, we do not need to evaluate the other question for that portion of the species’ range.

In undertaking this analysis for the golden paintbrush, we choose to evaluate the status question first—we consider information pertaining to the geographic distribution of both the species and the threats that the species faces to identify any portions of the range where the species is endangered or threatened.

For golden paintbrush, we considered whether the threats are geographically

concentrated in any portion of the species' range at a biologically meaningful scale. We examined the following threats: (1) Habitat succession of prairie and grassland habitats to shrub and forest due to fire suppression, interspecific competition, and invasive species; (2) development of property for commercial, residential, and agricultural use; (3) low potential for expansion and refugia due to constriction of habitat by surrounding development or land use; (4) recreational picking (including associated trampling); (5) herbivory (on plants and seeds); (6) hybridization with harsh paintbrush; and (7) the effects of climate change, including cumulative effects. Although the impact of hybridization with the harsh paintbrush is most evident in the south Puget Sound region of the species' range, this potential stressor is being addressed throughout the species' range with the hybridization strategy and guidance. We found no concentration of threats in any portion of the golden paintbrush's range at a biologically meaningful scale.

Therefore, no portion of the species' range can provide a basis for determining that the species is in danger of extinction now, or likely to become so in the foreseeable future, in a significant portion of its range, and we find the species is not in danger of extinction now, or likely to become so in the foreseeable future, in any significant portion of its range. This is consistent with the courts' holdings in *Desert Survivors v. Department of the Interior*, No. 16-cv-01165-JCS, 2018 WL 4053447 (N.D. Cal. Aug. 24, 2018), and *Center for Biological Diversity v. Jewell*, 248 F. Supp. 3d, 946, 959 (D. Ariz. 2017).

Determination of Status

Our review of the best available scientific and commercial information indicates that the golden paintbrush does not meet the definition of an endangered species or a threatened species in accordance with sections 3(6) and 3(20) of the Act. Therefore, we propose to remove the golden paintbrush from the List.

Effects of the Rule

This proposal, if made final, would revise 50 CFR 17.12(h) by removing the golden paintbrush from the List. The prohibitions and conservation measures provided by the Act, particularly through sections 7 and 9, would no longer apply to the golden paintbrush. Federal agencies would no longer be required to consult with the Service under section 7 of the Act in the event that activities they authorize, fund, or carry out may affect the golden paintbrush. There is no critical habitat designated for this species, so there would be no effect to 50 CFR 17.96.

Post-delisting Monitoring

Section 4(g)(1) of the Act requires us to implement a system to monitor effectively, for not less than 5 years, all species that have been recovered and delisted (50 CFR 17.11, 17.12). The purpose of this post-delisting monitoring is to verify that a species remains secure from the risk of extinction after it has been removed from the protections of the Act. The monitoring is designed to detect the failure of any delisted species to sustain itself without the protective measures provided by the Act. If, at any time during the monitoring period, data indicate that the protective status under the Act should be reinstated, we can initiate listing procedures, including, if appropriate, emergency listing under section 4(b)(7) of the Act. Section 4(g) of the Act explicitly requires us to cooperate with the States in development and implementation of post-delisting monitoring programs, but we remain responsible for compliance with section 4(g) and, therefore, must remain actively engaged in all phases of post-delisting monitoring. We also seek active participation of other entities that are expected to assume responsibilities for the species' conservation post-delisting.

We propose to delist the golden paintbrush in light of new information available and recovery actions taken. We prepared a draft post-delisting monitoring plan that describes the methods proposed for monitoring the species, if it is removed from the List. Monitoring of flowering plants at each golden paintbrush site extant in 2018 would take

place every other year, over a minimum of 5 years after final delisting. Proposed monitoring efforts would be slightly modified from prior protocols, by only requiring a visual estimation of population size when clearly numbering >1,000 but <10,000, or $\geq 10,000$ flowering individuals, as opposed to an actual count or calculated estimate of flowering plants. This modification should streamline monitoring efforts. It is our intent to work with our partners to maintain the recovered status of golden paintbrush. With publication of this proposed rule, we seek public and peer review comments on the draft post-delisting monitoring plan, including its objectives and methods (see *Public Comments*, above). The draft post-delisting monitoring plan can be found at <http://www.regulations.gov> under Docket No. FWS–R1–ES–2020–0060.

Required Determinations

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

- (1) Be logically organized;
- (2) Use the active voice to address readers directly;
- (3) Use clear language rather than jargon;
- (4) Be divided into short sections and sentences; and
- (5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the names of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

National Environmental Policy Act

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Native American culture, and to make information available to Tribes.

We do not believe that any Tribes would be affected if we adopt this rule as proposed. There are currently no golden paintbrush sites on Tribal lands, although some sites may lie within the usual and accustomed places for Tribal collection and gathering of resources. We welcome input from potentially affected Tribes on our proposal.

References Cited

A complete list of all references cited in this proposed rule is available on the Internet at <http://www.regulations.gov> at Docket No. FWS–R1–ES–2020–0060, or upon request from the State Supervisor, Washington Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this proposed rule are the staff of the Washington Fish and Wildlife Office.

Signing Authority

The Director, U.S. Fish and Wildlife Service, approved this document and authorized the undersigned to sign and submit the document to the Office of the Federal Register for publication electronically as an official document of the U.S. Fish and Wildlife Service. Martha Williams, Principal Deputy Director Exercising the Delegated Authority of the Director, U.S. Fish and Wildlife Service, approved this document on June 21, 2021, for publication.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

AUTHORITY: 16 U.S.C. 1361-1407; 1531-1544; and 4201-4245, unless otherwise noted.

§ 17.12 [Amended]

2. Amend § 17.12(h) by removing the entry for “*Castilleja levisecta*” under FLOWERING PLANTS from the List of Endangered and Threatened Plants.

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